

**IMPORTANT NOTICE:** Robert Bosch LLC and the manufacturers whose vehicles are accessible using the CDR System urge end users to use the latest production release of the Crash Data Retrieval system software when viewing, printing or exporting any retrieved data from within the CDR program. Using the latest version of the CDR software is the best way to ensure that retrieved data has been translated using the most current information provided by the manufacturers of the vehicles supported by this product.

## CDR File Information

User Entered VIN	2FAHP71W47X129872
User	LT. A.S. KLANE #1301, MSP-CARS
Case Number	2011-CAR-00556
EDR Data Imaging Date	12/28/2011
Crash Date	11/02/2011
Filename	2011-CAR-000556 2FAHP71W47X129872 ACM.CDRX
Saved on	Wednesday, December 28 2011 at 09:22:11
Collected with CDR version	Crash Data Retrieval Tool 4.3
Reported with CDR version	Crash Data Retrieval Tool 4.3
EDR Device Type	Airbag Control Module
Event(s) recovered	Frontal Deployment Side deployment

## Comments

12/28/2011, 0910 HRS  
 GHQ GARAGE, FRAMINGHAM.  
 2007 FORD CROWN VICTORIA.  
 MA REG. 169-GP0. MSP #9200.  
 1 VEHICLE C-16, RT. 190SB STERLING.  
 IMPACT DAMAGE TO RIGHT FRONT CORNER AND SIDE. ROLLOVER ENTIRE.  
 P235/55R17. OEM.  
 NO POWER. ELECTRICAL SYSTEM DAMAGED.  
 ATTEMPTS THROUGH PCM AND ACM MOUNTED IN VEHICLE.  
 PCM ADAPTER UTILIZED AS REQUIRED.

## Data Limitations

The retrieval of this data has been authorized by the vehicle's owner, or other legal authority such as a subpoena or search warrant, as indicated by the CDR tool user on Wednesday, December 28 2011 at 09:22:11.

### Limitations that are important for users of the Bosch Crash Data Retrieval (CDR) tool on this Ford product to know

**Disclaimer:** Ford Motor Company Restraint Control Modules (RCM's) were designed to record deceleration data for the purpose of understanding the approximate input data the Restraint Control Module used to determine whether or not to deploy restraint devices. Ford Motor Company RCM's were not designed for the purpose of assisting accident reconstructionists. Ford RCM modules do not record vehicle speed, throttle position, brake on-off, and other data desired by accident reconstructionists, which may be recorded in some 1999 model year and later General Motors modules. There is a second module in the vehicle, the Powertrain Control Module (PCM) which may record vehicle speed, brake, and throttle information. Proper precautions must be taken when reading the RCM not to spoliate the data in the PCM. Those precautions are discussed later in this document.

The time series deceleration data recorded by Ford's module during a crash is mathematically integrated into a partial Delta V by the Bosch tool. Delta\_V is the change in velocity during the recording time and is NOT the speed the vehicle was traveling before the accident.

Accident reconstructionists must be aware of the limitations of the data recorded in Ford's control modules and should compare the recorded data with the physical evidence at the accident scene using professional accident reconstruction techniques (i.e. vehicle crush characteristics, momentum analysis. etc.) before making any assumptions about the import and validity of the data recorded in the module with respect to the crash event being analyzed. The following describes specific limitations that must be considered when analyzing recorded data.

1. There may be no deceleration data recorded in the module.  
 Loss of power (cut wires, damaged battery, crushed fuse box) to the module during or immediately after the crash may prevent the crash data from being written to NVM (non-volatile memory). A backup power supply within the module has sufficient power to continue to analyze the deceleration data and deploy restraint devices if needed, but there is limited backup power for recording.

2. If there are no deployment times recorded, but airbags or other restraint devices are observed to have deployed, the recorded data that you read after that event are most likely from a prior event. This module family does utilize backup power left over after any deployment to attempt to record information from the crash, and is much more likely to get a recording than prior modules, but it is still theoretically possible that there may not be any recording from a new event in which power is lost.

3. The recorded Longitudinal Delta V may understate or overstate the total Delta\_V under certain circumstances.

3.1. This module has two different displays with Delta V information. The cumulative longitudinal Delta V shown in the system status section of the report reflects the change in forward velocity that the sensing system experienced from the point of algorithm entry to algorithm exit. The cumulative longitudinal Delta V may understate the Delta V slightly because the algorithm does not begin until the deceleration reaches a pre-specified level of approximately 2 G's, so the first one or two milliseconds of actual Delta V may not be included in the total.

3.2. If the acceleration levels measured exceed the sensor range of +/- 40G's, the data may be clipped and the area under the curve beyond +/- 40G's will not be integrated in to the cumulative Delta V.

3.3. In addition to the cumulative Delta V, this module records and displays a time series up to 192 data points of longitudinal vehicle acceleration at 0.8 millisecond intervals from which a partial Delta V is calculated and displayed. The 192 data points consist of 64 data points post deployment, 1 at deployment, and 127 prior to deployment. Depending upon the time from algorithm wake up to deployment, the duration of the data in the graph may not be sufficient to reach the maximum or final Delta V of the collision.

3.4. The cumulative longitudinal Delta V is more likely than the graph to represent the Delta V of the complete crash because it will typically be over a longer duration. One purpose of looking at the graph is to determine if the G level exceeded the sensor range of +/- 40G's which would lead to under or over reporting Delta V.

3.5. The cumulative longitudinal Delta V is not the total resultant Delta V in anything other than a pure frontal collision. If the collision is angular, you must determine the Principal Direction of Force and divide by the cosine of the PDOF angle from frontal to get the total resultant Delta V.

3.6. The "Cumulative Delta V during the algorithm run time accurately reports observed delta-V for the period the RCM's decision making algorithm runs which may, in some cases, be longer than the actual crash pulse for a given event. For that reason, the reported Delta V may be different than a reconstruction based calculated Delta V for a given event. For example, during heavy slowing, such as braking or wheels locked from damage after the initial contact phase in a crash, the vehicle is capable of slowing as much as 2 mph per 100 milliseconds. If the algorithm runs for another 100 milliseconds beyond the end of the normally observed crash pulse, the data recorded may reflect an over reported event Delta V inasmuch as it includes the 2 mph from post contact braking observed while the system was still active. Similarly, after contact a vehicle may continue through the contact area to rest and may experience some level of positive X axis acceleration during that period. Even over a short period, some of that positive X axis acceleration may be observed by the RCM while the algorithm is still running and that may cause an under reporting of the delta-V relative to what may be calculated by a reconstructionist. Users should compare the reported algorithm run time to a normal crash duration of approximately 100-150 ms. If the algorithm run time is significantly longer than the reconstruction estimated crash duration, you may want to consider accounting for after contact acceleration - whether X positive or negative - where appropriate. End users using the crash pulse graph to estimate the event Delta V, should not include any speed loss accumulated as a function of braking prior to algorithm wake up in the event Delta V."

4. Event Recording Complete will indicate if data from the recorded event has been fully written to the RCM memory or if it has been interrupted and not fully written. Even if the event Recording Complete is "no", the data may still be valid. In general, fields with nonzero data written in them have been written successfully. The exception is passenger airbag occupant classification, which when unwritten displays "empty".

5. The module is not intended to record longitudinal acceleration/deceleration in a side-impact event. If the side impact generates a longitudinal deceleration component sufficient to wake up the frontal deployment algorithm, there may be a recording of longitudinal deceleration.

6. If there is any question that the restraint system did not perform as it was designed to perform, please read the system only through the diagnostic link connector. The Bosch CDR kit provides a connector to plug directly into the restraint control module. The Bosch CDR RCM Interface Cable connects only power, ground, and memory readout pins to the relevant vehicle restraint control module. The other pins normally connected to inputs, like sensors, and outputs, such as airbags, are not connected to anything when you use the RCM Interface Cable connector to plug directly into the module. Since the vehicle restraint control module is constantly monitoring airbag system readiness, it will detect that the connection to the input sensors and output airbags has been lost. The restraint control module will write a new diagnostic trouble code into memory for each device that is not connected. These new diagnostic trouble codes could potentially overwrite previously written diagnostic trouble codes present prior to the accident and spoil evidence necessary to determine if the restraint system performed in the accident as it was designed to perform. Not only could this prevent Ford from being able to determine if the system performed as it was designed to perform, but, regardless of innocent inadvertence, you could be charged with evidence spoliation in any litigation that may arise out of the accident. If you cannot read the module out

through the diagnostic link connector, and if you suspect improper system performance, contact Ford Motor Company and request their assistance to read the module out with a proper vehicle simulator attached. If you choose to read out through the module small connector, Ford recommends that you do so in the vehicle and that you leave the second large connector plugged into the vehicle wiring harness to minimize the number of new diagnostic trouble codes created.

#### **POWERTRAIN CONTROL MODULE DATA SPOILATION CAUTIONS:**

When reading the RCM users must use caution to not spoil data in the PCM. This Restraint Control Module does not record vehicle speed, braking, or throttle inputs prior to or during a collision event. There is a Powertrain Control Module (PCM) in this vehicle which records vehicle speed, brake, throttle angle and other parameters in a Data Recording Device (DRD), an EEPROM chip, whenever the key is in the run position. The PCM is intended to lock the recording if an airbag or safety belt pretensioner has deployed, and the vehicle data bus stays up long enough for the deploy signal from the RCM to reach the PCM. If the deploy signal has not reached the PCM and the PCM is powered, the DRD data can be overwritten by new data. If there is any doubt as to the PCM deployment lock status, the user must proceed with the understanding that the data may not be locked and could be overwritten if key power is turned on. It is recommended that the PCM not be key powered until the EEPROM memory can be properly read out by a special procedure that prevents data from being overwritten. To read PCM data, follow the instructions in the CDR help file to determine which cable and adapter to use and how to connect to Ford PCMs for the purpose of downloading DRD data. The Bosch PCM readout cables and adapter are not included in the CDR kit and can be purchased directly from Bosch or through an authorized CDR tool distributor.

The PCM also has a diagnostic trouble code history kept in Keep Alive Memory (KAM). KAM is a form of RAM memory powered directly from the battery and is preserved as long as there is battery power to the PCM (the ignition key does not have to be on). If all power is removed from the PCM or the PCM exits flash mode after reading the Data Recording Device, KAM is cleared. The reader must make a judgment as to which data, DRD or KAM, is more likely to provide useful data for the situation at hand.

It has been Ford's experience that the DRD data is more useful than the KAM data when:

1. The airbag has deployed and it is likely that the DRD is locked and has data
2. Power was lost in the crash and KAM is already cleared due to power loss
3. Power has been depleted subsequent to the crash and KAM is already lost.
4. Crash damage makes it likely there are multiple codes in KAM due to accident damage which were not likely to be present before the crash, where it is difficult to isolate codes present before the crash that may have contributed to the cause of the crash.

The KAM data may be more valuable when there has been no airbag deployment and it is likely the key has been left on after the event such that no useful data is likely to remain in the DRD.

If there is insufficient information to make a judgment per the above, Ford's experience is that the DRD data is more likely to have significance, and that it is better to prioritize reading the DRD data first. To preserve the DRD data, unplug the PCM connectors while the RCM is being read.

#### **AIRBAG MODULE DATA SOURCES:**

All RCM recorded data is measured, calculated, and stored internally, sensors external to the RCM include the following:

1. The Driver and Passenger Belt Switch Circuits are wired directly to the RCM.
2. The Driver's Seat Track Position Switch Circuit is wired directly to the RCM.
3. The Side Impact Sensors (if equipped) are located at the base of the B-pillars and are wired directly to the RCM.
4. The Occupant Classification Sensor is located in the front passenger seat and transmits data directly to the RCM on a dedicated high-speed CAN bus.
5. Front Impact Sensors (right and left) are located on top of radiator support bracket.

02004\_RCM-Takata2\_r001

### System Status at Time of Data Retrieval

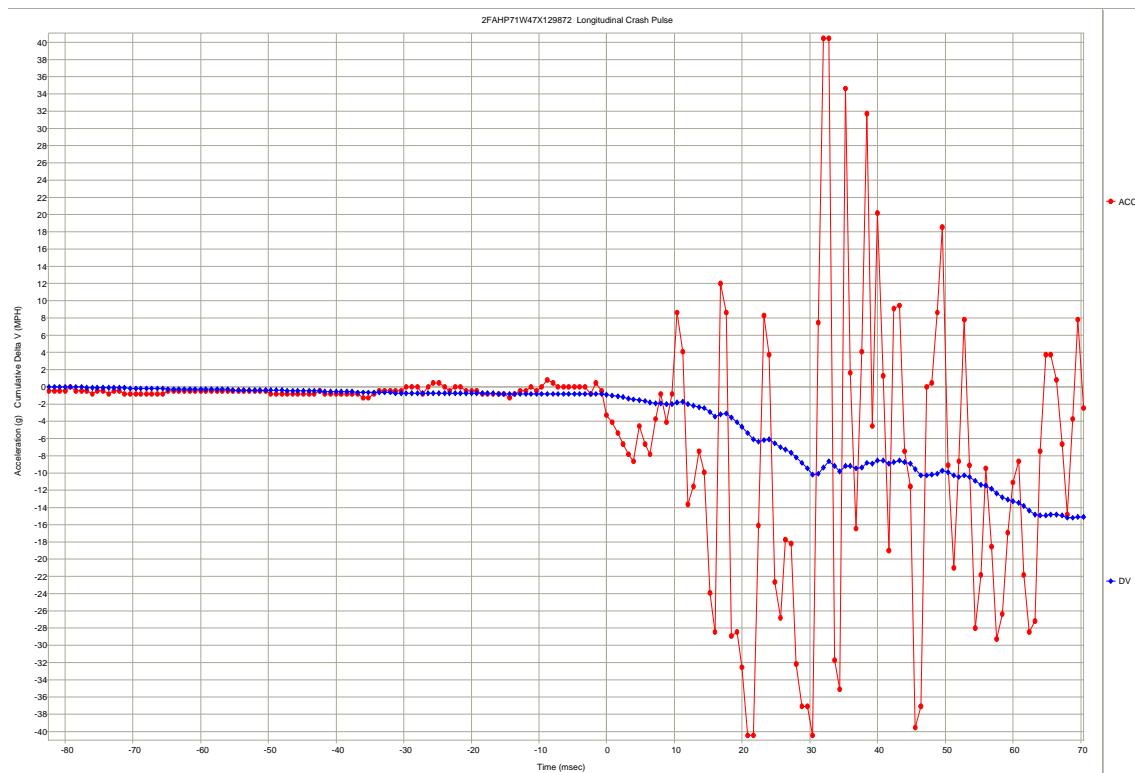
Vehicle Identification Number	2FAHP71W47X129872
Module Serial Number	0624158U
Restraints Control Module Part Number	7W73-14B321-BA
Restraints Control Module Software Version Number	0
Restraints Control Module Software Date	September 7, 2005
Longitudinal velocity change during algorithm run time (MPH)	-22.67
Algorithm run time (msec)	712.8
Deployment Counter	1
Restraints System Faults Present at time of deployment.	No

### System Status At Frontal Deployment

Ignition Cycle Key On Timer at Start of Frontal Event (sec)	2540
Driver's Belt Switch Circuit Status	Unbuckled
Passenger's Belt Switch Circuit Status	Unbuckled
Driver seat forward of switch point	Rearward
Passenger occupant classification status	Empty
Driver First Stage Deployment Time (msec)	19.2
Driver Second Stage Deployment Time (msec)	29.6
Passenger First Stage Deployment Time (msec)	N/A
Passenger Second Stage Deployment Time (msec)	N/A
Driver Pretensioner Time Deployment Time (msec)	N/A
Passenger Pretensioner Deployment Time (msec)	N/A
Driver Column Device Deployment Time (msec)	N/A
Frontal Event Record Locked	Yes
Frontal Event Recording Complete	Yes

### System Status At Side Deployment

Ignition Cycle Key On Timer at Start of Side Event (sec)	2540
Driver's Belt Switch Circuit Status	Unbuckled
Passenger's Belt Switch Circuit Status	Unbuckled
Driver seat forward of switch point	Rearward
Passenger occupant classification status	Empty
Driver Side Airbag Deployment Time (msec)	N/A
Passenger Side Airbag Deployment Time (msec)	N/A
Driver Pretensioner Time Deployment Time (msec)	N/A
Passenger Pretensioner Deployment Time (msec)	N/A
Side Event Record Locked	Yes
Side Event Recording Complete	Yes



### Crash Pulse Data

Milliseconds	Long. Acceleration (Gs)	Long. Cumulative Delta V (MPH)
-82.4	-0.41	-0.01
-81.6	-0.41	-0.01
-80.8	-0.41	-0.02
-80.0	-0.41	-0.03
-79.2	0.00	-0.03
-78.4	-0.41	-0.04
-77.6	-0.41	-0.04
-76.8	-0.41	-0.05
-76.0	-0.82	-0.07
-75.2	-0.41	-0.07
-74.4	-0.41	-0.08
-73.6	-0.82	-0.09
-72.8	-0.41	-0.10
-72.0	-0.41	-0.11
-71.2	-0.82	-0.12
-70.4	-0.82	-0.14
-69.6	-0.82	-0.15
-68.8	-0.82	-0.17
-68.0	-0.82	-0.18
-67.2	-0.82	-0.20
-66.4	-0.82	-0.21
-65.6	-0.82	-0.22
-64.8	-0.41	-0.23
-64.0	-0.41	-0.24
-63.2	-0.41	-0.25
-62.4	-0.41	-0.25
-61.6	-0.41	-0.26
-60.8	-0.41	-0.27
-60.0	-0.41	-0.27
-59.2	-0.41	-0.28
-58.4	-0.41	-0.29
-57.6	-0.41	-0.30
-56.8	-0.41	-0.30
-56.0	-0.41	-0.31
-55.2	-0.41	-0.32
-54.4	-0.41	-0.33
-53.6	-0.41	-0.33
-52.8	-0.41	-0.34
-52.0	-0.41	-0.35
-51.2	-0.41	-0.35
-50.4	-0.41	-0.36
-49.6	-0.82	-0.38
-48.8	-0.82	-0.39
-48.0	-0.82	-0.41
-47.2	-0.82	-0.42
-46.4	-0.82	-0.43
-45.6	-0.82	-0.45
-44.8	-0.82	-0.46
-44.0	-0.82	-0.48
-43.2	-0.82	-0.49

Milliseconds	Long. Acceleration (Gs)	Long. Cumulative Delta V (MPH)
-42.4	-0.41	-0.50
-41.6	-0.82	-0.51
-40.8	-0.82	-0.53
-40.0	-0.82	-0.54
-39.2	-0.82	-0.56
-38.4	-0.82	-0.57
-37.6	-0.82	-0.59
-36.8	-0.82	-0.60
-36.0	-1.24	-0.62
-35.2	-1.24	-0.64
-34.4	-0.82	-0.66
-33.6	-0.41	-0.67
-32.8	-0.41	-0.67
-32.0	-0.41	-0.68
-31.2	-0.41	-0.69
-30.4	-0.41	-0.69
-29.6	0.00	-0.69
-28.8	0.00	-0.69
-28.0	0.00	-0.69
-27.2	-0.82	-0.71
-26.4	0.00	-0.71
-25.6	0.41	-0.70
-24.8	0.41	-0.69
-24.0	0.00	-0.69
-23.2	-0.41	-0.70
-22.4	0.00	-0.70
-21.6	0.00	-0.70
-20.8	-0.41	-0.71
-20.0	-0.41	-0.72
-19.2	-0.41	-0.72
-18.4	-0.82	-0.74
-17.6	-0.82	-0.75
-16.8	-0.82	-0.77
-16.0	-0.82	-0.78
-15.2	-0.82	-0.80
-14.4	-1.24	-0.82
-13.6	-0.82	-0.83
-12.8	-0.41	-0.84
-12.0	-0.41	-0.85
-11.2	0.00	-0.85
-10.4	-0.41	-0.85
-9.6	0.00	-0.85
-8.8	0.82	-0.84
-8.0	0.41	-0.83
-7.2	0.00	-0.83
-6.4	0.00	-0.83
-5.6	0.00	-0.83
-4.8	0.00	-0.83
-4.0	0.00	-0.83
-3.2	0.00	-0.83
-2.4	-0.82	-0.85
-1.6	0.41	-0.84
-0.8	-0.41	-0.85

Milliseconds	Long. Acceleration (Gs)	Long. Cumulative Delta V (MPH)
0.0	-3.30	-0.90
0.8	-4.12	-0.98
1.6	-5.36	-1.07
2.4	-6.60	-1.19
3.2	-7.83	-1.32
4.0	-8.66	-1.48
4.8	-4.54	-1.56
5.6	-6.60	-1.67
6.4	-7.83	-1.81
7.2	-3.71	-1.87
8.0	-0.82	-1.89
8.8	-4.12	-1.96
9.6	-0.82	-1.98
10.4	8.66	-1.82
11.2	4.12	-1.75
12.0	-13.61	-1.99
12.8	-11.55	-2.19
13.6	-7.42	-2.32
14.4	-9.90	-2.50
15.2	-23.92	-2.92
16.0	-28.45	-3.42
16.8	11.96	-3.21
17.6	8.66	-3.05
18.4	-28.87	-3.56
19.2	-28.45	-4.06
20.0	-32.58	-4.63
20.8	-40.41	-5.34
21.6	-40.41	-6.05
22.4	-16.08	-6.33
23.2	8.25	-6.19
24.0	3.71	-6.12
24.8	-22.68	-6.52
25.6	-26.80	-6.99
26.4	-17.73	-7.30
27.2	-18.14	-7.62
28.0	-32.16	-8.18
28.8	-37.11	-8.84
29.6	-37.11	-9.49
30.4	-40.41	-10.20
31.2	7.42	-10.07
32.0	40.41	-9.36
32.8	40.41	-8.65
33.6	-31.75	-9.21
34.4	-35.05	-9.82
35.2	34.64	-9.21
36.0	1.65	-9.18
36.8	-16.49	-9.47
37.6	4.12	-9.40
38.4	31.75	-8.84
39.2	-4.54	-8.92
40.0	20.21	-8.57
40.8	1.24	-8.55
41.6	-18.97	-8.88

Milliseconds	Long. Acceleration (Gs)	Long. Cumulative Delta V (MPH)
42.4	9.07	-8.72
43.2	9.48	-8.55
44.0	-7.42	-8.68
44.8	-11.55	-8.89
45.6	-39.59	-9.58
46.4	-37.11	-10.23
47.2	0.00	-10.23
48.0	0.41	-10.23
48.8	8.66	-10.07
49.6	18.56	-9.75
50.4	-9.07	-9.91
51.2	-21.03	-10.28
52.0	-8.66	-10.43
52.8	7.83	-10.29
53.6	-9.07	-10.45
54.4	-28.04	-10.94
55.2	-21.86	-11.33
56.0	-9.48	-11.49
56.8	-18.56	-11.82
57.6	-29.28	-12.33
58.4	-26.39	-12.79
59.2	-16.91	-13.09
60.0	-11.13	-13.29
60.8	-8.66	-13.44
61.6	-21.86	-13.82
62.4	-28.45	-14.32
63.2	-27.22	-14.80
64.0	-7.42	-14.93
64.8	3.71	-14.86
65.6	3.71	-14.80
66.4	0.82	-14.78
67.2	-6.60	-14.90
68.0	-14.85	-15.16
68.8	-3.71	-15.23
69.6	7.83	-15.09
70.4	-2.47	-15.13

## Hexadecimal Data

Data that the vehicle manufacturer has specified for data retrieval is shown in the hexadecimal data section of the CDR report. The hexadecimal data section of the CDR report may contain data that is not translated by the CDR program. The control module contains additional data that is not retrievable by the CDR system.

0000:	30	30	30	32	46	41	48	50	37	31	57	34	37	58	31	32
0010:	39	38	37	32	03	BB	FF	00	60	D9	00	00	F8	29	05	44
0020:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0030:	0E	22	0E	2B	39	56	0A	12	03	CC	30	30	07	0D	26	BC
0040:	BC	BC	BC	0D	20	20	BC	00								
0050:	00	00	BC	BC	BC	05	80	37	57	37	33	02	00	B5	1C	C4
0060:	09	32	00	BB	FF	DB	FD	7C	01	EF	61	56	1D	EF	61	56
0070:	1D	32	34	31	38	30	35	39	2D	41	41	20	20	AD	A8	94
0080:	8F	55	50	42	3E	62	41	00	00	E8	FF	87	ED	4F	FC	
0090:	0F	C0	02	20	10	08	04	00	00	00	00	C0	FF	0F	C0	
00A0:	00	00	00	0C	00	00	00	00	30	01	88	8B	73	29	19	02
00B0:	30	01	88	8B	73	29	19	02	20	01	88	8B	73	29	19	02
00C0:	20	01	88	8B	73	29	19	02	BC	21	00	00	00	00	00	00
00D0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00E0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00F0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0100:	00	00	30	36	32	34	31	35	38	55	30	30	35	31	39	30
0110:	36	43	30	30	35	31	38	33	32	36	30	30	34	43	34	34
0120:	30	33	30	30	34	43	43	32	38	31	65	85	82	51	07	62
0130:	63	12	C3	B6	8A	00	28	00	00	00	84	6D	03	00	00	00
0140:	03	00	1C	00	00	00	03	00	19	00	00	00	00	00	02	81
0150:	80	6D	1C	00	00	00	03	00	1C	00	00	00	03	00	19	00
0160:	00	00	00	00	01	81	4E	00	AB	A3	8A	00	F2	09	C3	B6
0170:	8A	00	00	00	00	00	00	00	00	05	00	00	00	00	00	00
0180:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0190:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
01A0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
01B0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
01C0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
01D0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
01E0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
01F0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0200:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0210:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0220:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0230:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0240:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
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0270:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0280:	00	00	00	00	00	00	00	00	00	00	00	00	00	40	00	00
0290:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
02A0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	11
02B0:	00	00	00	00	00	00	00	00	00	00	00	33	33	00	01	
02C0:	AA	F0	7F	03	33	41	42	39	38	39	38	44	20	00	00	00
02D0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
02E0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
02F0:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0300:	00	01	0A	02	02	01	00	01	00	02	00	06	00	14	01	00
0310:	00	00	00	05	06	04	01	02	05	05	04	06	23	00	00	00
0320:	CC	01	00	00	00	00	00	55	00	00	00	E8	03	00	05	
0330:	25	02	08	02	C2	33	C4	00	C0	01	44	00	A0	00	84	03
0340:	86	01	99	02	7F	03	19	00	9A	01	FE	FF	C3	00	77	01
0350:	08	02	20	03	8F	01	84	03	D0	07	20	03	FE	FF	E8	03
0360:	F4	01	85	00	64	00	14	00	BD	00	BD	00	00	07	07	07

0370: 08 00 00 04 03 03 00 00 A5 00 79 00 00 07 00 05  
 0380: DF 00 8F 01 17 02 F9 00 BB 02 B4 00 8F 01 96 00  
 0390: 54 01 E8 03 62 0E 26 07 00 00 00 00 00 00 00 00 00  
 03A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 03B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 03C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 03D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 03E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 03F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 0400: 00 01 07 08 02 00 00 00 00 00 00 04 04 05 05 05  
 0410: 05 06 03 05 06 01 01 01 70 01 02 02 6D 00 00 01  
 0420: 00 01 00 02 00 01 00 01 00 01 00 01 64 00 31 00  
 0430: 64 00 00 00 64 00 00 00 00 00 31 00 00 00 64 00  
 0440: C8 00 FA 00 3F 01 82 00 82 00 C7 00 4A 01 64 00  
 0450: A5 00 93 00 93 00 64 00 2C 01 2C 01 5E 01 20 03  
 0460: 90 01 C8 00 DC 00 9D 03 C3 00 2C 01 0E 01 96 00  
 0470: 00 00 AF 00 8A 02 90 01 54 01 2C 01 58 02 4F 01  
 0480: B0 04 BC 02 58 02 90 01 04 01 2C 01 4B 00 6E 00  
 0490: A0 00 90 01 F4 01 72 01 90 01 E0 15 00 00 84 03  
 04A0: 8A 02 14 05 02 61 00 00 00 00 00 00 00 00 00 00 00  
 04B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 04C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 04D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
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 04F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 0500: 00 01 08 01 01 01 05 04 04 04 07 06 04 05 01 1D 00  
 0510: 00 01 00 18 00 01 00 00 00 00 00 00 00 00 00 03 00  
 0520: 34 03 ED 01 20 03 A4 01 57 01 4A 04 02 02 BC 02  
 0530: F4 01 DB 00 F0 00 82 00 F4 01 FA 00 44 00 FA 00  
 0540: FA 00 17 C8 03 70 86 00 00 00 00 00 00 00 00 00 00  
 0550: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
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 0570: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 0580: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 0590: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 05A0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 05B0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 05C0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 05D0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 05E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 05F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
 0600: 36 41 7F 7E 6A 52 95 B2 94 6C 95 C3 B4 96 AC C6  
 0610: BF A8 9A 94 B4 C4 C1 91 76 76 7D 8F A3 88 6C 85  
 0620: 80 80 80 80 7F 80 80 80 81 80 80 81 80 80 81 81  
 0630: 81 81 81 81 81 80 80 80 80 80 80 80 80 80 80 80  
 0640: 80 80 80 80 80 80 80 80 80 81 81 81 81 81 81 81  
 0650: 81 81 80 81 81 81 81 81 81 82 82 82 81 80 80 80  
 0660: 80 80 7F 7F 81 7F 7E 7E 7F 80 7F 7F 80 80 80 80  
 0670: 81 81 81 81 82 81 80 80 7F 80 7F 7D 7E 7F 7F  
 0680: 7F 7F 7F 7F 81 7E 80 87 89 8C 8F 92 94 8A 8F 92  
 0690: 88 81 89 81 6A 75 A0 9B 91 97 B9 C4 62 6A C5 C4  
 06A0: CE E1 E1 A6 6B 76 B6 C0 AA AB CD D9 D9 E1 6D 1D  
 06B0: 1D CC D4 2B 7B A7 75 32 8A 4E 7C AD 69 68 91 9B  
 06C0: DF D9 80 82 82 81 80 7E 7D 7C 7C 7C 7E 80 81 81  
 06D0: 80 7F 7E 7D 7C 7C 7C 7E 7F 80 81 80 7E 7D 7D  
 06E0: 7E 7E 7D 7A 7C 7F 7D 7C 7D 7B 7C 7E 7F 80 82  
 06F0: 82 80 81 82 83 7F 7C 7D 7F 7E 82 8E 94 8F 8C 7F  
 0700: 71 6C 6B 69 6C 6E 78 85 A6 B0 AE AD A1 8C 7A 71  
 0710: 61 5E 76 8E BD C8 AE 9B 76 58 46 42 45 5B 87 A2  
 0720: CE D5 BC A8 7D 58 44 45 58 6A 80 95 BF CA BD AE  
 0730: 86 63 4E 49 4C 60 75 7D 93 AE B8 B7 B2 A9 9C 96  
 0740: 88 7B 74 74 76 76 71 6D 6A 75 81 85 8B 8D 8E 8E  
 0750: 8E 8B 8D 8A 87 80 7B 77 73 73 7C 8D 93 8E 7C 78  
 0760: 76 6D 66 6D 77 8E A3 B0 B2 AA 98 7D 6F 54 4E 60  
 0770: 6A 76 87 98 9C 9B 9A 8D 84 75 6F 6D 6D 75 81 8B

0780:	8C	8B	89	84	80	78	6D	66	65	67	71	7E	84	91	94	8B
0790:	87	7E	78	74	73	74	7F	7F	7E	7F						
07A0:	7F	7F	7F	7F	7E	7E	7D	7D	7D	7E	7E	7F	80	80	80	80
07B0:	7F	7E	7E	7E	7E	7E	7F	80	80	80	7F	7E	7E	7D	7D	7E
07C0:	7E	7E	7F	7F	7E	7E	7E	7E	7E	7F	80	80	7F	7E	7D	7D
07D0:	7D	7E	7E	7F	80	82	82	80	7F	7D	7B	78	76	76	7B	7F
07E0:	83	85	87	87	85	84	80	7C	7A	7A	7B	7B	7C	7E	82	84
07F0:	83	82	80	7D	7A	78	76	78	7B	80	82	87	88	85	84	7F
0800:	7A	76	77	79	7A	7D	7E	83	86	84	82	7F	7D	7B	7A	7B
0810:	7D	7F	81	81	80	7F	7E	7E	7E	7E	7F	80	80	80	80	80
0820:	80	7E	7E	7E	7E	7E	7F	81	81	81	80	7E	7B	7A	78	
0830:	78	79	7B	81	85	85	85	86	82	80	7F	7C	7B	7C	7E	80
0840:	87	8B	8B	84	7E	7B	7C	7C	80	8A	8B	86	82	80	7E	79
0850:	77	79	81	92	A6	AD	AB	A2	9B	8D	76	6D	59	3F	3A	48
0860:	71	94	B7	CC	D9	CF	A5	90	71	6E	68	67	6A	6D	6D	6F
0870:	82	84	85	85	92	95	98	9B	AB	B8	BA	B9	B8	B6	9F	91
0880:	6D	51	3D	3F	4C	68	90	A7	CB	D8	D2	C2	93	61	47	3E
0890:	42	5D	83	95	AD	B8	AD	9E	72	54	4C	4C	54	6C	89	97
08A0:	AB	BA	B8	AD	A1	82	60	50	4C	4F	5B	6E	79	8B	98	9B
08B0:	97	8B	80	7B	7B	80	89	8A	87	83	84	7E	7B	74	74	76
08C0:	78	7D	7F	85	88	87	7E	7B	7B	7B	7A	77	76	77	7D	81
08D0:	82	7E	7E	7F	7E	7E	80	84	85	82	7D	7C	7D	7B	7A	7D
08E0:	7E	83	88	89	88	89	7F									
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0910:	7E	7D	7D	7E	7E	80	80	81	80	80	7F	7F	80	81	80	
0920:	80	80	80	7E	7E	7C	7A	7A	7B	7C	7E	82	84	83	81	7D
0930:	7B	7B	7B	7D	82	83	84	84	82	81	7D	7C	7D	7D	7E	7E
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0960:	7F	80	82	01	A5	A3	8A	00	EC	09	09	00	B3	B3	41	00
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0980:	00	43	00	48	00	00	00	00	00	04	20	02	00	00	18	00
0990:	19	00	18	00	19	00	18	00	18	00	18	00	18	00	25	00
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09C0:	00	02	04	01	04	01	01	01	2F	00	2A	00	59	00	84	00
09D0:	09	01	00	00	D4	00	D3	00	83	00	D4	00	D3	00	83	00
09E0:	1F	1E	7F	0B	0B	7D	7E	87	00	AA	00	33	3D	0C	00	00
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0B20:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0B30:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0B40:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
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0B70:	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
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0FA0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00  
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E304 39 38 37 32

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